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ABSTRACT

Aggression, tantrums, and self-injury can function as escape behaviors, allowing children to terminate aversive demand (teaching) situations. In one group of six psychotic children, these behaviors were frequent in demand situations, and rare in nondemand situations. Further, when stimuli correlated with the termination of demands were presented, problematic behaviors decreased dramatically. These problems were treated in two ways--by an escape-extinction procedure in which the child was prohibited from leaving the demand situation as long as disruptive behavior was occurring, and the introduction of strongly preferred reinforcers to attenuate the aversiveness of the demand situation thereby reducing the motivation to emit escape responses. Such an approach was successful in eliminating the aggressive and self-injurious behaviors of two children and the tantrum behavior of two others. (Author/PJC)

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Escape as a Factor in the Maintenance of Aggression, Tantrums and Self-injury

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Paper presented at the 5th Annual Meeting of the Association for Behavior Analysis, Dearborn, Michigan, June 1979.

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Escape as a factor in the maintenance of aggression, tantrums, and self-injury

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State University of New York at Stony Brook

Psychotic children typically manifest a variety of severe behavior disorders which help retard the acquisition of appropriate social and academic behaviors. Foremost among such problem behaviors are aggression, tantrums, and self-injury. Traditionally, behavioral clinicians have stressed the attention-getting function of these behaviors. That is, children were said to engage in such undesirable conduct as a means of coercing social reinforcers from adults. Several recent studies in our laboratory have suggested, however, that other variables may also have an important influence on the maintenance of these problem behaviors. Specifically, it appears that under some circumstances escape factors may play a significant role.

Data are presented on six psychotic children who participated in several sets of experiments using a reversal design as the method of evaluation. All children were socially withdrawn, had minimal verbal skills, and engaged in high rates of self-stimulatory behaviors. Two of the children were severely self-injurious; two were aggressive; and two engaged in high rates of tantrums.

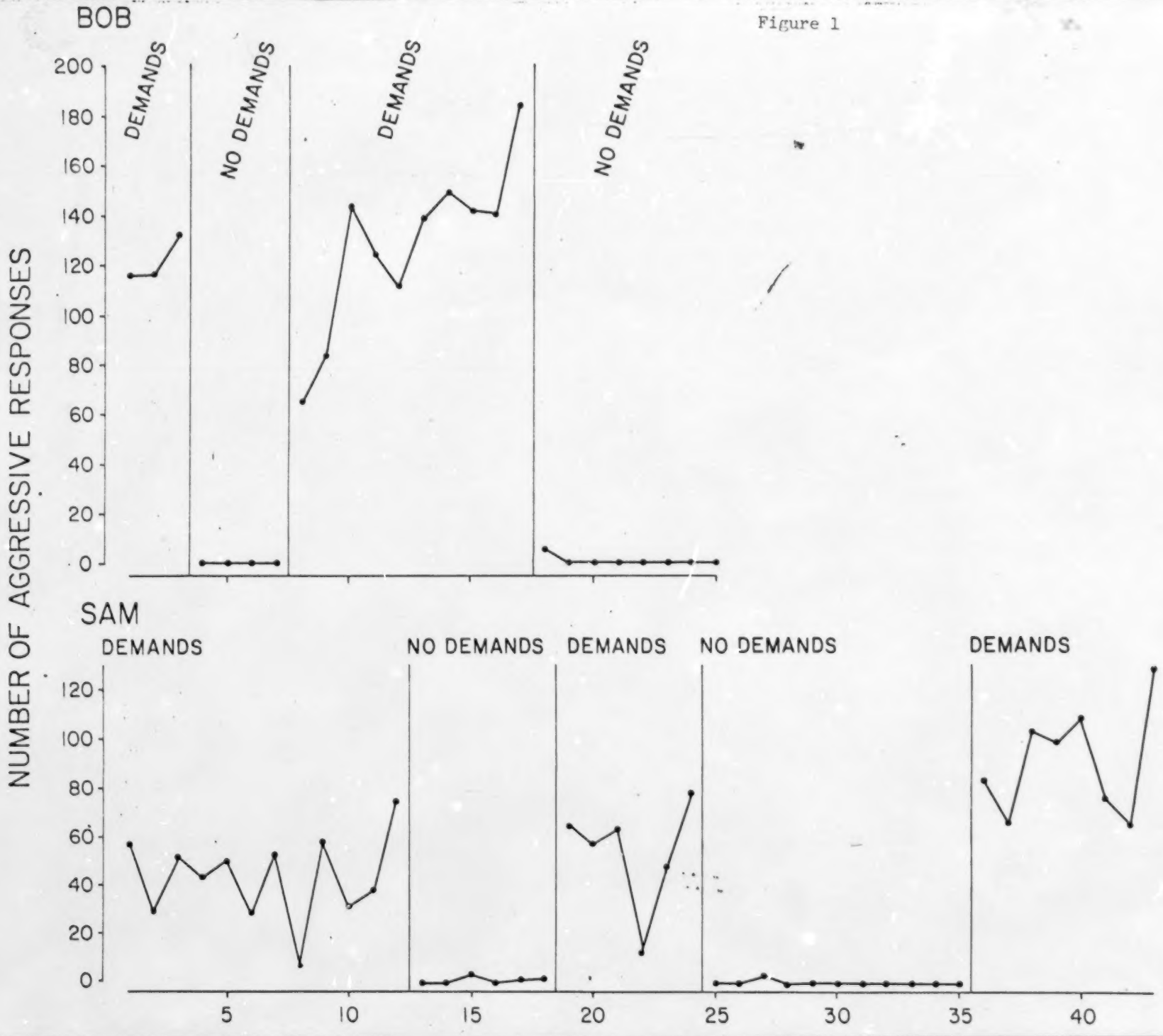
For each child under study, the specific problem behavior which characterized that child was frequently observed in a situation containing many demands and rarely observed in a situation containing no demands. Further, when stimuli correlated with the termination of demands were presented, problematic behaviors abruptly decreased to near-zero levels. These data are consistent with the view that such problem behaviors may be functioning as escape responses which are maintained by the negative reinforcement inherent in the termination or presumably aversive demand situations.

Two treatment strategies are suggested by an escape conceptualization. First, to the extent that a problem behavior is maintained by escape from a

demand situation, one approach would be to prohibit the child from leaving the situation as long as the child was engaging in undesirable conduct. This strategy was successfully employed to eliminate the aggressive behavior of one child. A second stragegy is based on the assumption that escape behaviors are produced because the demand sessions are aversive. Therefore, a plausible treatment tactic would be to reduce the aversiveness of the sessions by systematically introducing high levels of socially reinforcing activities or preferred sources of primary reinforcement into the sessions. Such an approach was successful in eliminating the aggressive and self-injurious behaviors of two children and the tantrum behavior of two other children.

Making demands on a child increases the frequency of problem behaviors over that obtained when demands are not presented. This effect is seen whether the behavior involved is aggression (Figure 1), tantrums (Figure 2), or self-injury (Figure 3).

Figure 1


BOB
DEMANDS
NO DEMANDS
DEMANDS
NO DEMANDS
NUMBER OF AGGRESSIVE RESPONSES
200
180
160
140
120
100
80
60
40
20
0
SAM
DEMANDS
NO DEMANDS
DEMANDS
NO DEMANDS
DEMANDS
120
100
80
60
40
20
0
5
10
15
20
25
30
35
40

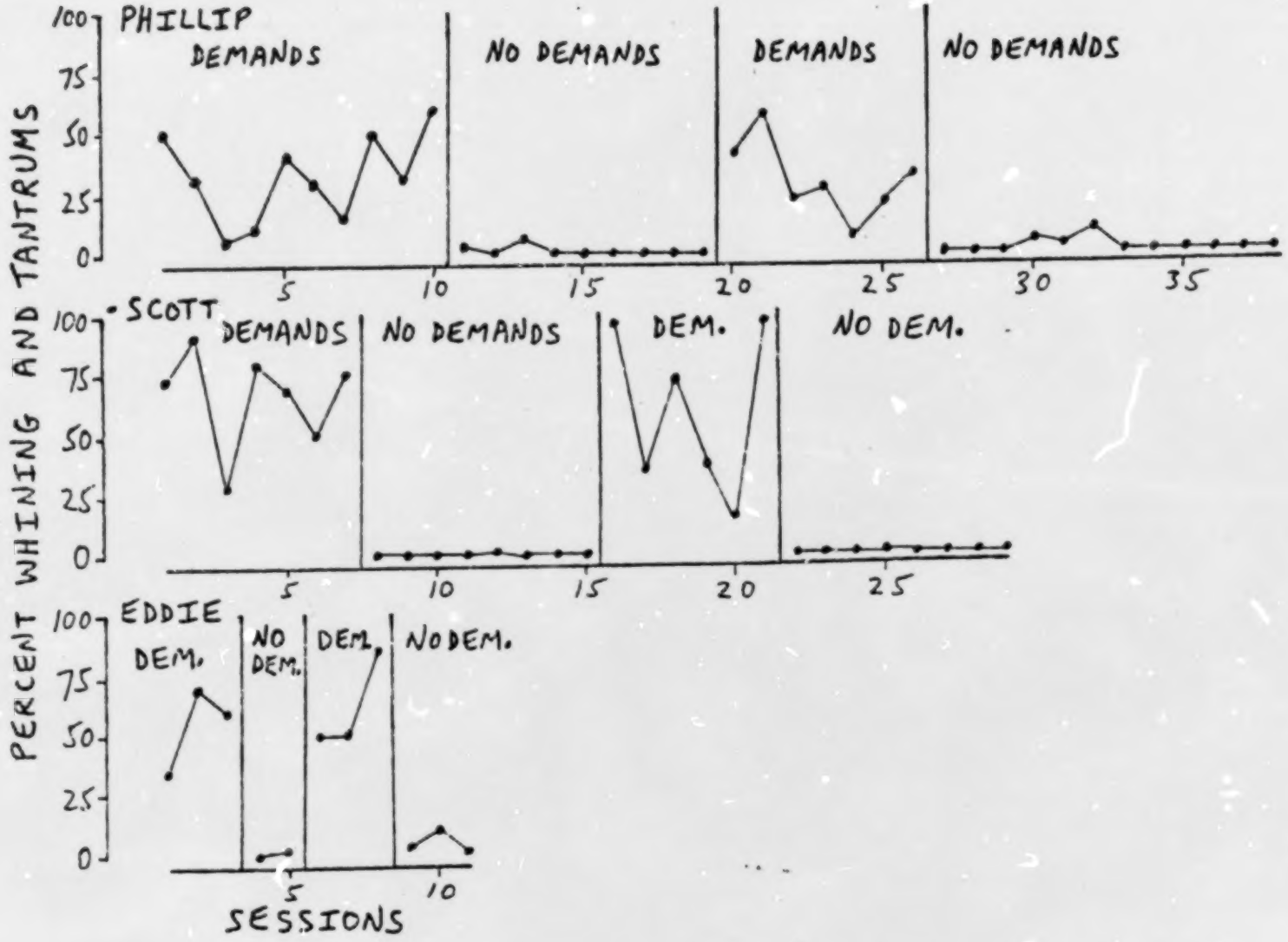
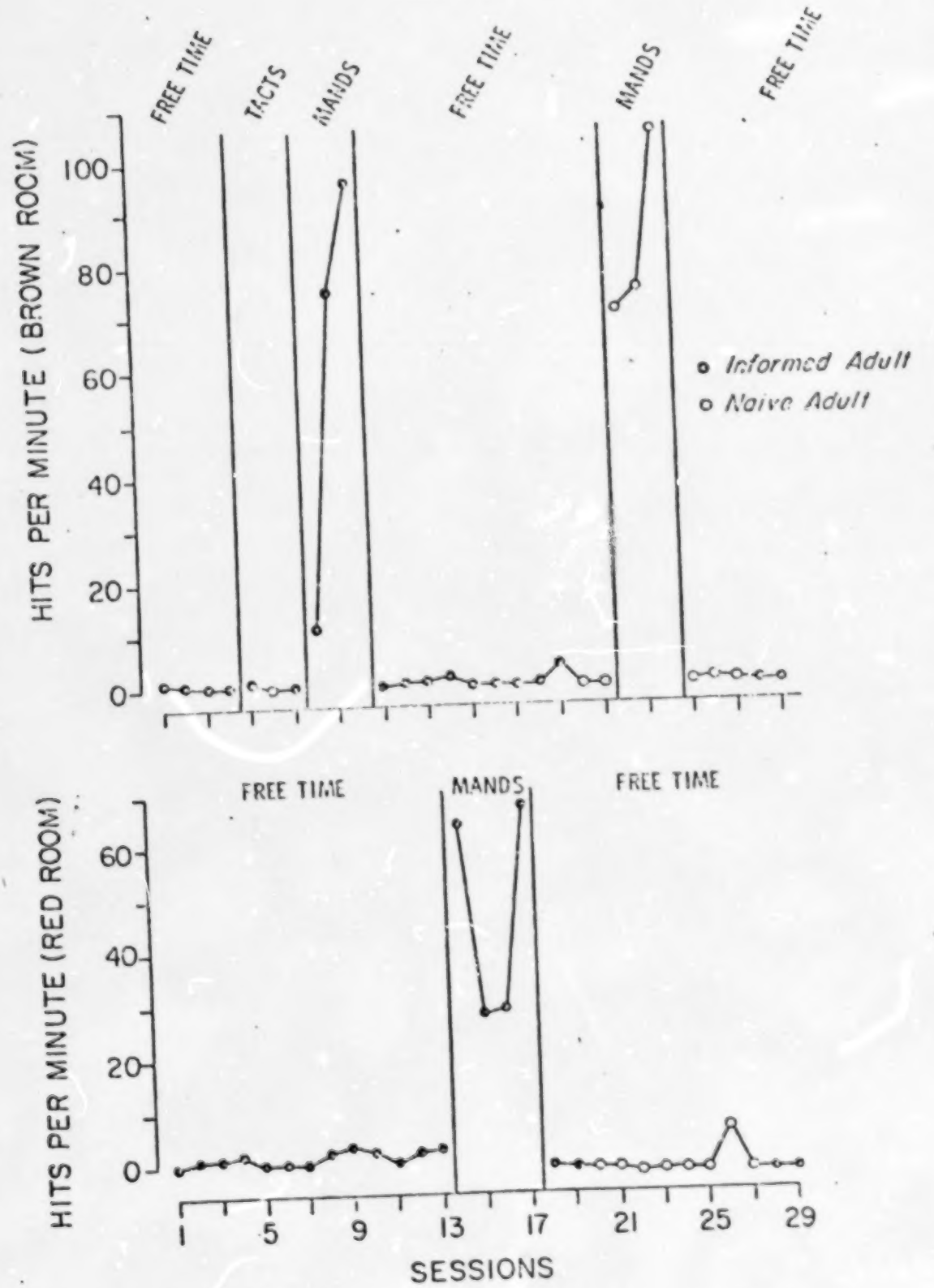

PHILLIP
DEMANDS
NO DEMANDS
DEMANDS
NO DEMANDS
SCOTT
DEMANDS
NO DEMANDS
DEM.
NO DEM.
EDDIE
DEM.
NO DEM.
DEM.
NO DEM.
PERCENT WHINING AND TANTRUMS
100
75
50
25
0
5
10
15
20
25
30
35
SESSIONS

Figure 2

Figure 3


FREE TIME
TACTS
MANDS
FREE TIME
MANDS
FREE TIME
HITS PER MINUTE (BROWN ROOM)
100
80
60
40
20
0
Informed Adult
Naive Adult
FREE TIME
MANDS
FREE TIME
HITS PER MINUTE (RED ROOM)
60
40
20
0
1
5
9
13
17
21
25
29
SESSIONS

When a stimulus which is correlated with the termination of demands (Safety Signal) is presented to a child, problem behaviors abruptly decrease. This decrease does not occur in the absence of a Safety Signal. The effect is seen whether the behavior involved is aggression (Figure 4), tantrums (Figure 5), or self-injury (Figure 6). Note: In Figure 4, the Safety Signal was introduced after the 5th minute for Bob and after the 10th minute for Sam; in Figure 6, it was introduced after the 10th minute for both children. In Figure 6, the Safety Signal was "O.K., let's go"; "The sky is blue" was the equivalent of No Safety Signal.

Figure 4

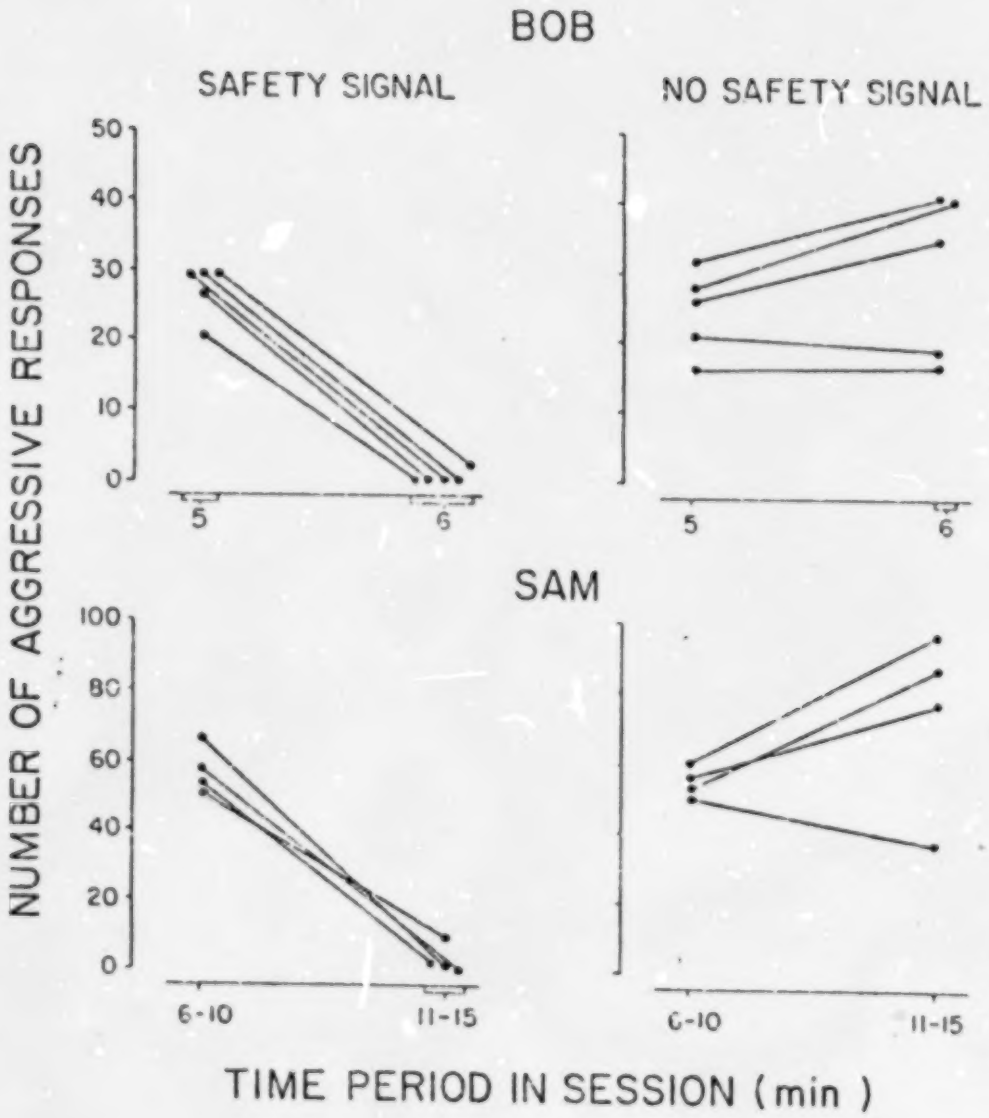

BOB
SAFETY SIGNAL
NO SAFETY SIGNAL
NUMBER OF AGGRESSIVE RESPONSES
50
40
30
20
10
0
5
6
SAM
100
80
60
40
20
0
6-10
11-15
TIME PERIOD IN SESSION (min)

Figure 5

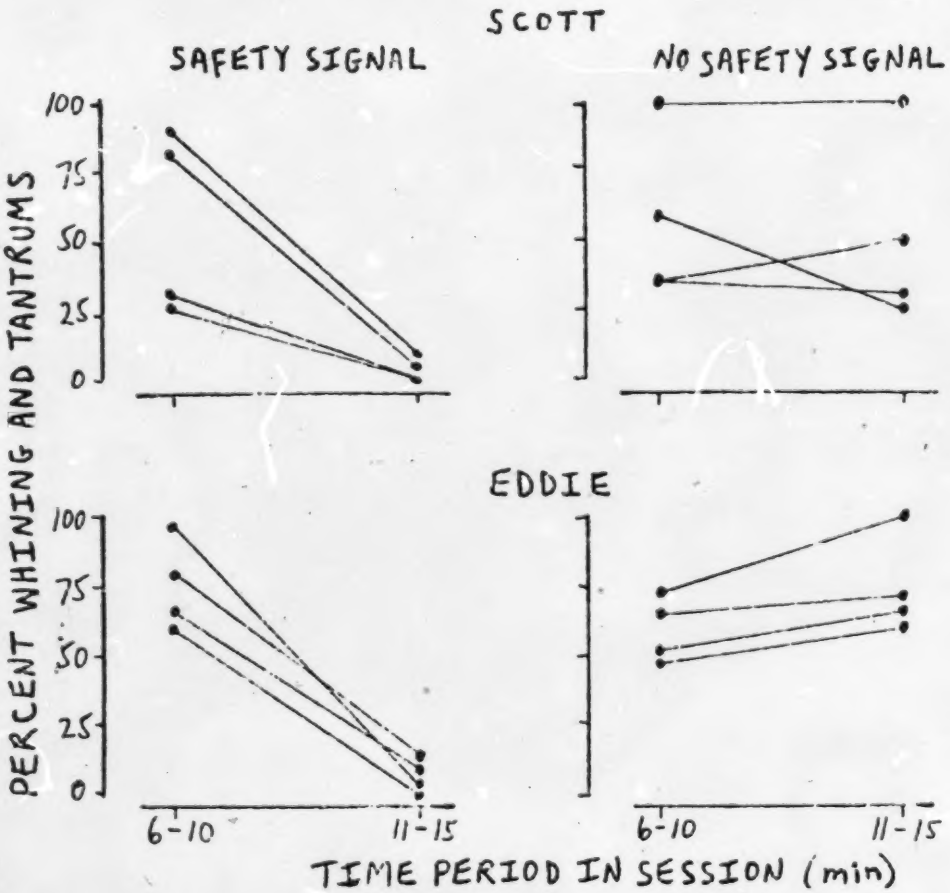
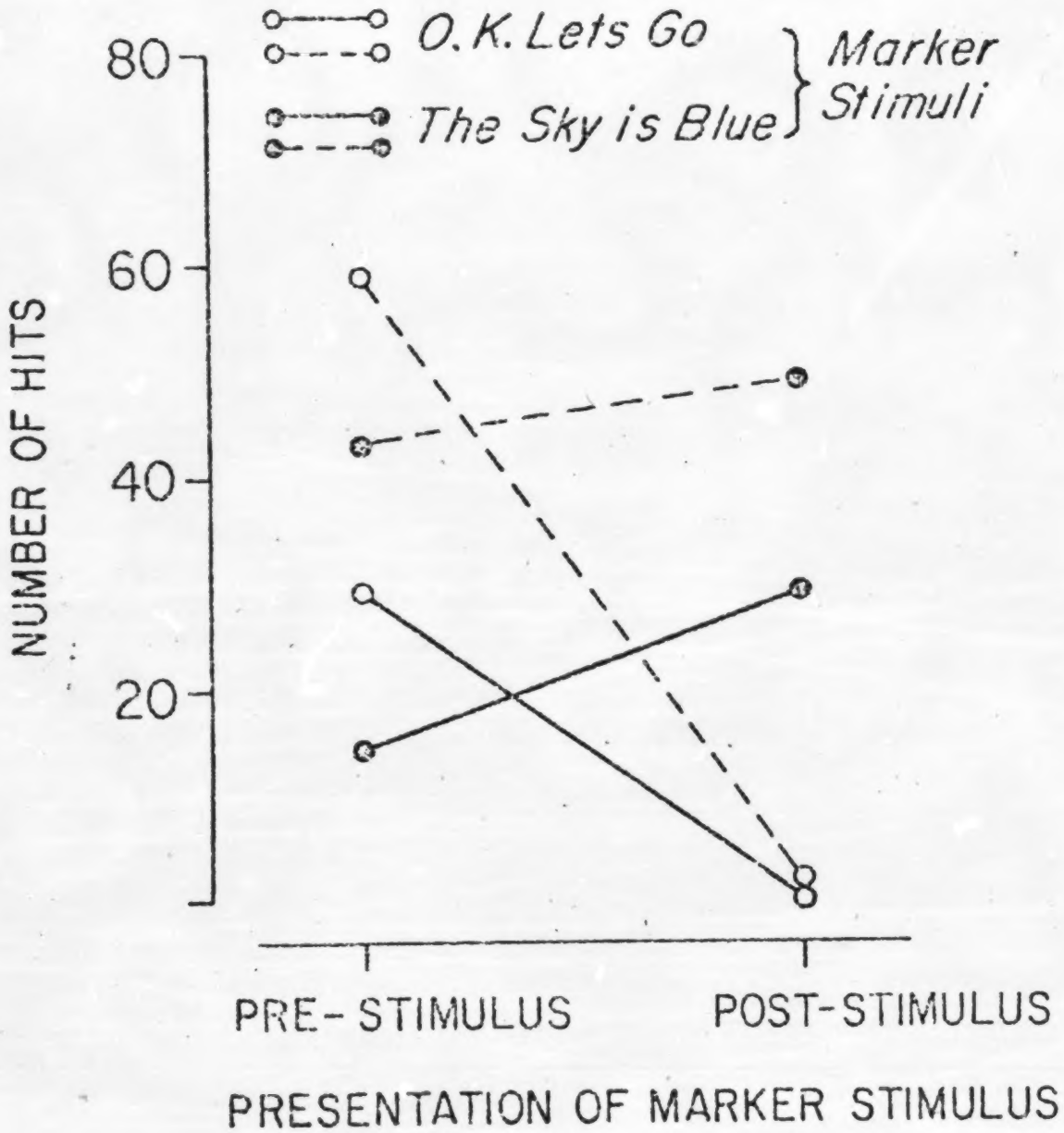
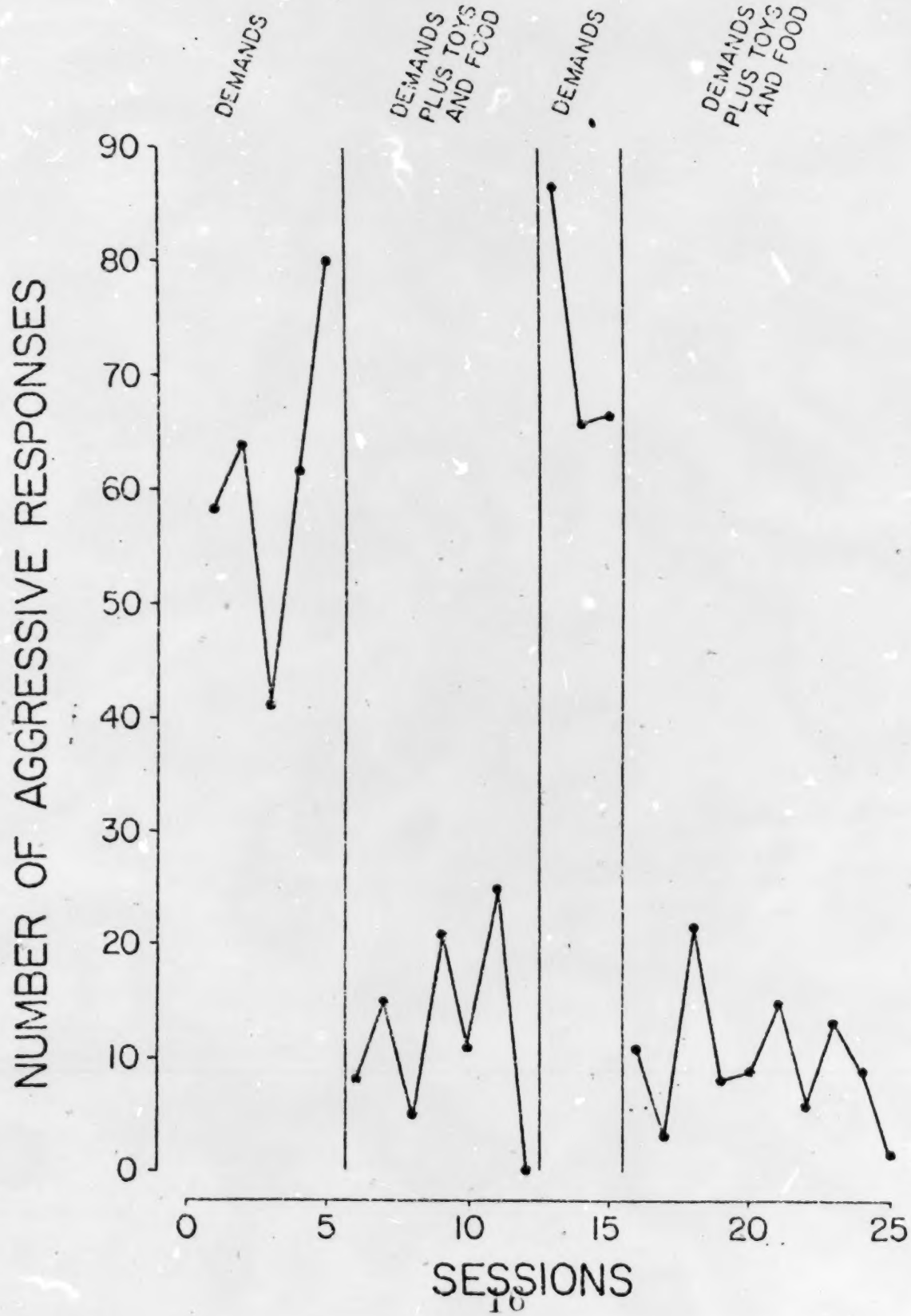

SCOTT
SAFETY SIGNAL
NO SAFETY SIGNAL
EDDIE
PERCENT WHINING AND TANTRUMS
100
75
50
25
0
6-10
11-15
TIME PERIOD IN SESSION (min)

Figure 6


O. K. Lets Go
The Sky is Blue
Marker Stimuli
80
60
40
20
NUMBER OF HITS
PRE-STIMULUS
POST-STIMULUS
PRESENTATION OF MARKER STIMULUS

If these problem behaviors are viewed as escape responses (the child attempts to escape an aversive demand situation by exhibiting problem behaviors), then one treatment might be to attenuate the aversiveness of the demand situation by introducing strong positive reinforcers into that situation, thereby reducing the motivation to emit escape responses. This procedure was carried out by introducing preferred toys and foods for one aggressive child (Figure 7) as well as for three children who exhibited tantrums (Figure 8); positive (amusing) topics of conversation were used for one self-injurious child (Figure 9). Another treatment used was to prevent the child from ever leaving the demand situation as long as problem behaviors were occurring (escape extinction). This treatment was carried out for one aggressive child (figure 10). In all of the above cases, problem behaviors were reduced.

Figure 7


DEMANDS
DEMANDS PLUS TOYS AND FOOD
DEMANDS
DEMANDS PLUS TOYS AND FOOD
NUMBER OF AGGRESSIVE RESPONSES
90
80
70
60
50
40
30
20
10
0
0
5
10
15
20
25
SESSIONS

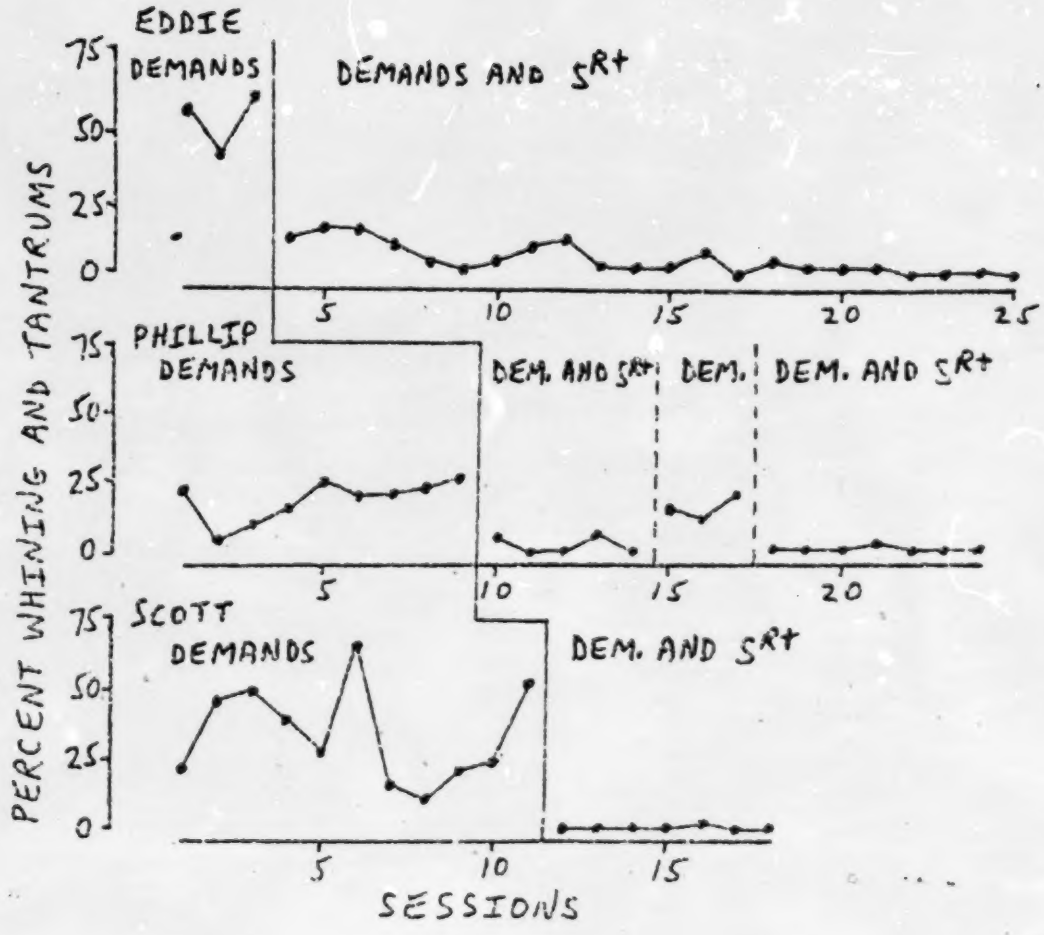

EDDIE
DEMANDS
DEMANDS AND SR+
PHILLIP
DEMANDS
DEM. AND SR+
DEM.
DEM. AND SR+
SCOTT
DEMANDS
DEM. AND SR+
PERCENT WHINING AND TANTRUMS
75
50
25
0
5
10
15
20
25
SESSIONS

Figure 8

Figure 9

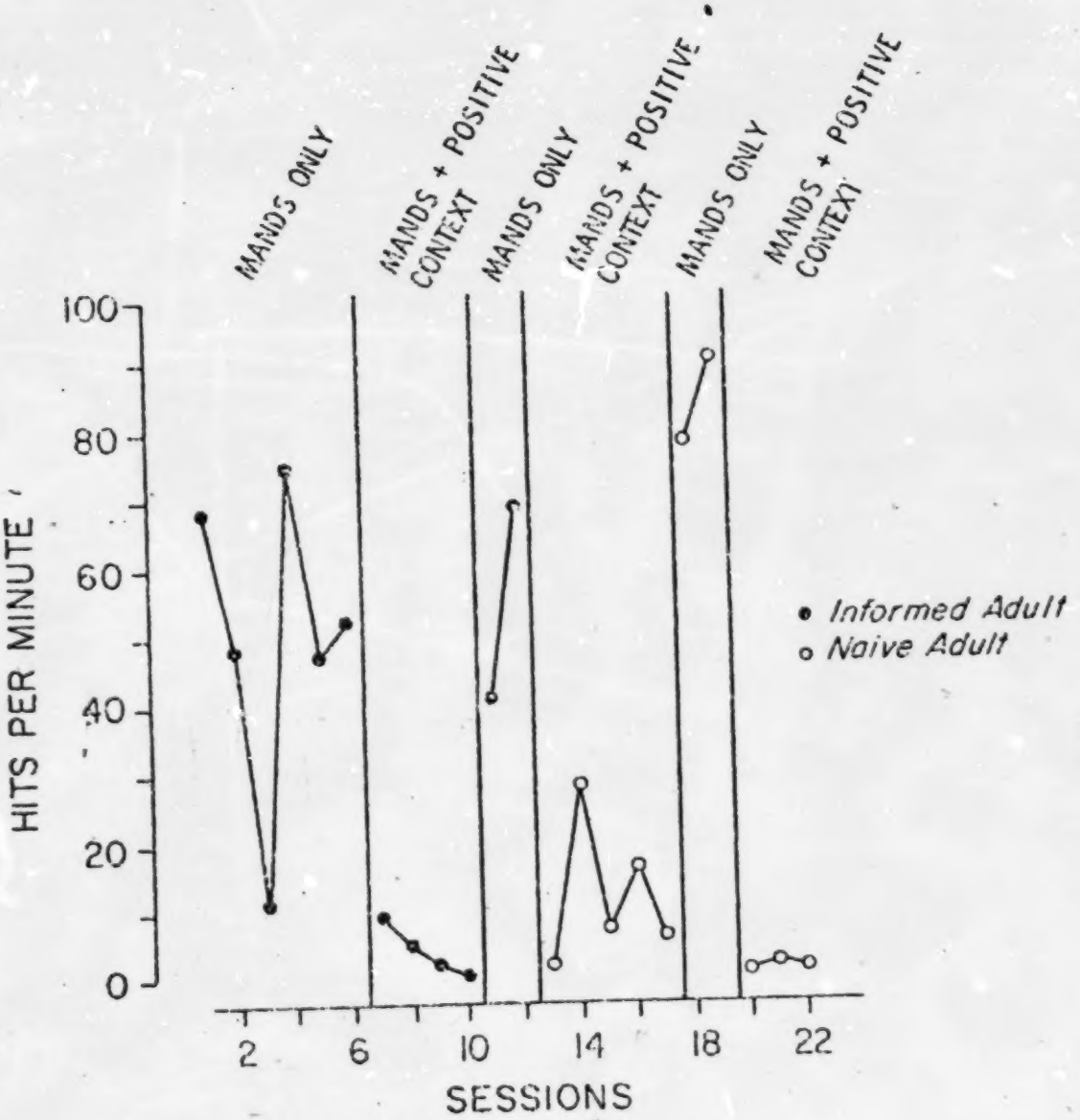
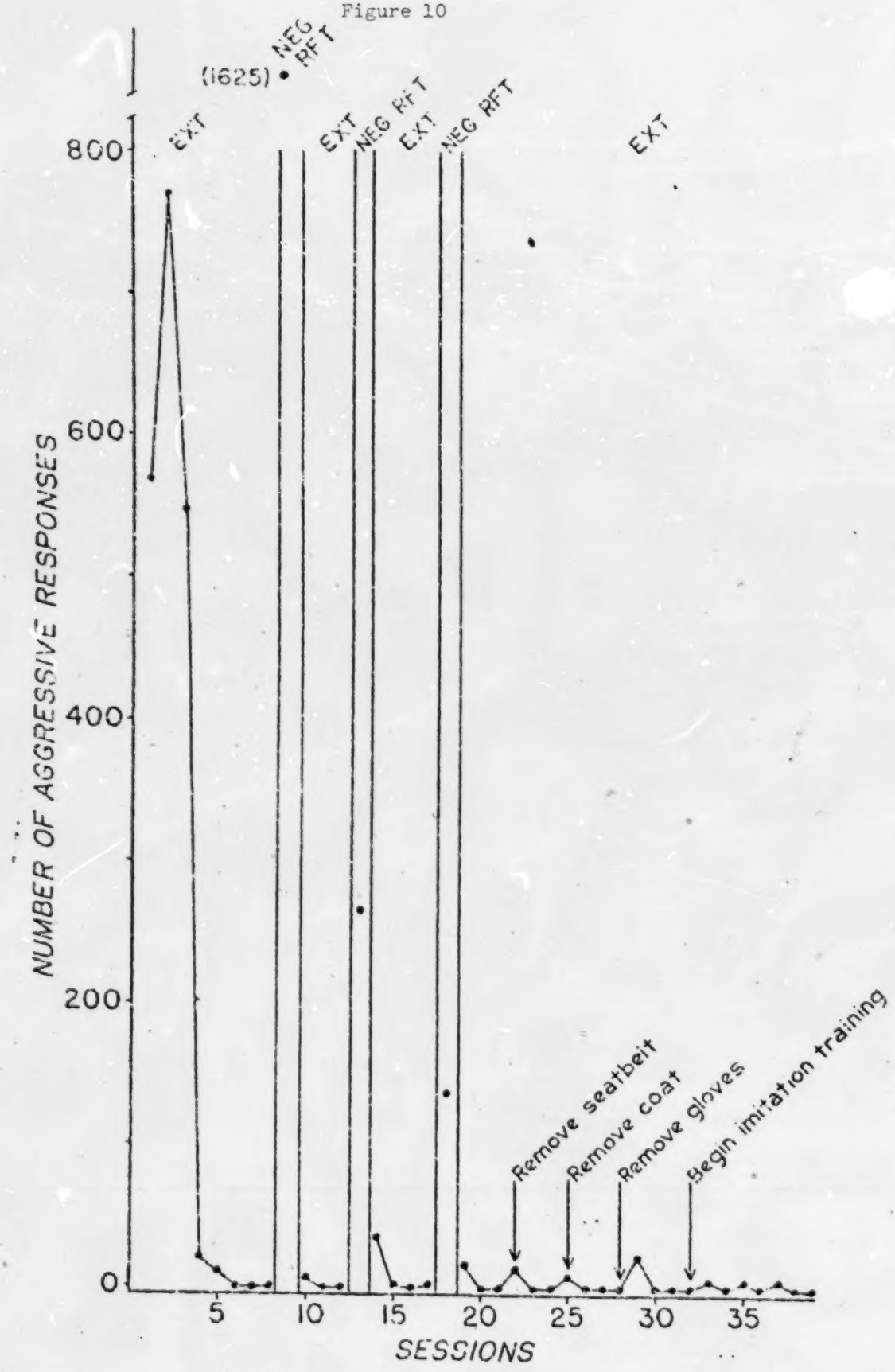

MANDS ONLY
MANDS + POSITIVE CONTEXT
MANDS ONLY
MANDS + POSITIVE CONTEXT
MANDS ONLY
MANDS + POSITIVE CONTEXT
HITS PER MINUTE
100
80
60
40
20
0
2
6
10
14
18
22
SESSIONS
Informed Adult
Naive Adult

Figure 10


(1625)
NEG RFT
EXT
EXT
NEG RFT
EXT
NEG RFT
EXT
800
600
400
200
0
NUMBER OF AGGRESSIVE RESPONSES
5
10
15
20
25
30
35
SESSIONS
Remove seatbelt
Remove coat
Remove gloves
Begin imitation training